

What is claimed is:

1. A method for controlling data transfer between a host and a plurality of storage devices, comprising:

receiving data for storage at a transport master, wherein said data for storage is addressed to said transport master;

5 receiving said data for storage at a transport slave, wherein said data for storage is addressed to said transport master, and wherein said data for storage is received at said transport master and said transport slave substantially simultaneously;

providing from said transport master said data for storage to a first device interface;

10 providing from said transport slave said data for storage to a second device interface;

storing said data for storage on a first device; and

storing said data for storage on a second device.

2. The method of Claim 1, further comprising:

receiving a request for data at said transport master, wherein said request for data is addressed to said transport master;

5 receiving said request for data at said transport slave, wherein said request for data is addressed to said transport master;

providing from said transport master said request for data to said first device interface;

providing from said transport slave said request for data to said second device interface; and

10 retrieving said requested data from said first device and from said second device, wherein in a normal operating mode said requested data from said first device is provided by said transport master to said host and said requested data from said second device is not provided to said host.

3. The method of Claim 2, wherein in a failover mode said requested data from said first device is not provided to said host and said requested data from said second device is provided by said transport slave to said host.

4. The method of Claim 1, further comprising:
passing a write confirmation signal from said first device interface to said transport master; and
passing a write confirmation signal from said second device interface to said transport slave.

5. The method of Claim 1, further comprising:
passing a write confirmation signal from said first device interface to said transport master;
passing a write failure signal from said second device interface to said transport slave;

providing said write failure signal to said transport master; and
notifying said host of said write failure signal.

6. The method of Claim 1, wherein in a non-RAID operating mode said data for storage and addressed to said transport master received at said transport slave is not stored on said second device.

7. The method of Claim 1, wherein said step of providing said data comprises constructing a data packet and providing said data packet to said first device interface and to said second device interface.

8. The method of Claim 1, wherein said transport master and said transport slave are interconnected to a host system bus by a system bus interface.

9. The method of Claim 1, wherein said method implements a RAID level 1 storage scheme.

10. A method for storing and retrieving data in a RAID 1 system, comprising:
enabling RAID 1 operation;
receiving data for storage from a first communications bus at a system bus
interface, wherein said data for storage is addressed to a transport master;
5 providing said data for storage to said transport master;
providing said data for storage to a transport slave at substantially the same time
said data for storage is provided to said transport master; and
storing said data in a first storage device and a second storage device.

11. The method of Claim 10, wherein said step of enabling RAID 1 operation
comprises enabling said transport slave to act on at least one of commands and data
addressed to said transport master.

12. The method of Claim 11, wherein a RAID 1 enable signal is provided to
enable RAID 1 operation.

13. The method of Claim 12, wherein said RAID 1 enable signal is generated
by at least one of a host processor and a local processor.

14. The method of Claim 10, further comprising retrieving data from said first
and second storage devices, wherein said data retrieved from said first storage device is
passed to said transport master, and wherein said data retrieved from said second device
is passed to said transport slave.

15. The method of Claim 14, wherein a request for data addressed to said transport master is provided to said transport master at substantially the same time that said request for data is provided to said transport slave.

16. A RAID controller, comprising:

a system bus interface;

a transport master interconnected to said system bus interface;

a first device interface interconnected to said transport master;

5 a transport slave interconnected to said system bus interface; and

a second device interface interconnected to said transport master, wherein at least one of a command and data addressed to said transport master and received at said system bus interface is passed to said transport master and is passed to said transport slave substantially simultaneously.

17. The RAID controller of Claim 16, wherein in a first mode of operation at least one of a command and data received at said transport master is provided to said first device interface and said at least one of a command and data received at said transport slave is provided to said second device interface.

18. The RAID controller of Claim 17, wherein in a second mode of operation data received at said transport master is provided to said first device interface, and wherein said data received at said transport slave is not provided to said second device interface.

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19. The RAID controller of Claim 16, further comprising:
a multiplexer comprising a first input interconnected to said first device interface,
a second input interconnected to said second device interface, and an output
interconnected to said transport master.

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20. The RAID controller of Claim 19, wherein in a normal operating mode
data read from said first device is provided to said multiplexer, wherein said data read
from said first device is provided to said transport master, wherein data read from said
second device is provided to said transport slave and to said multiplexer, and wherein
said data read from said second device is not passed by said multiplexer to said transport
master.

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21. The RAID controller of Claim 19, wherein in a failover mode data read
from said first device is provided to said multiplexer, wherein said data read from said
first device is not passed by said multiplexer to said transport master, wherein data read
from said second device is provided to said transport slave and to said multiplexer, and
wherein said data read from said second device is passed by said multiplexer to said
transport master.